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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,329	11/04/2003	Raghunath Padiyath	59346US002	4935
32692	7590	04/29/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			HOANG, QUOC DINH	
PO BOX 33427			ART UNIT	
ST. PAUL, MN 55133-3427			PAPER NUMBER	

2818

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/701,329	PADIYATH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Quoc D. Hoang	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2,3-0483-05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of Group II (claims 1-29) in the reply filed on 3/17/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prakash (US Pub No. 2005/0017628) in view of Kakinuma et al (U.S. Pat No. 6,579,422) (hereafter "Kakinuma").

Regarding claims 1, 5, 16 and 24, Prakash teaches a method of making an organic light-emitting device comprising: applying a flexible substrate or conductive substrate 10 ([0046]-[0052] and Fig. 1); applying a first electrode layer 12 ([0053] and Fig. 1); applying an insulating layer 22 on a portion of the first electrode layer 12 and on a portion of the substrate 10 ([0056]-[0057] and Fig. 2); applying a light-emitting layer 30 ([0058] and Fig. 3); and applying a second electrode layer 522 electrically isolated from the first electrode layer 12 ([0068] and Fig. 5).

Regarding claim 1, Prakash do not teaches advancing a web comprising a flexible substrate or conductive substrate in a direction, wherein at least one electrode layer is continuous in the direction of the advancing web substrate.

However, Kakinuma teaches advancing a web comprising a flexible substrate 1 in a direction, wherein at least one electrode layer 8 is continuous in the direction of the advancing web substrate 1 (col. 4, lines 1-35 and Fig. 2). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine a roll-to-roll flexible web substrate teaching of Kakinuma with Prakash's OLED, because it would have produced a plurality of unit devices at low cost and efficient mass production and as taught by Kakinuma, column 1, lines 64-67.

Regarding claims 2 and 3, Prakash teaches first electrode layer 12 is the anode and the second electrode layer is the cathode 522 ([0046]-[00568] and [0115]).

Regarding claim 4, Kakinuma teaches wherein the first electrode layer 4 is continuous in a direction perpendicular to the direction of the advancing web 1 (col. 4, lines 1-35 and Fig. 2).

Regarding claim 7, Prakash teaches removing the insulting layer 22 after applying the first electrode 12 ([0056]-[0057] and Fig. 2);.

Regarding claims 8 and 9, Kakinuma teaches wherein the first electrode layer 4 is applied in a first pattern comprising at least two stripes and the stripes range from being substantially parallel to substantially diagonal to the direction of the advancing web 1 (col. 4, lines 1-35 and Fig. 2).

Regarding claim 10, Kakinuma teaches wherein the first electrode layer 4 is substantially parallel and the second electrode layer 8 is applied in a second pattern comprising at least two stripes a the second pattern is substantially perpendicular to the first pattern (see Fig. 2).

Regarding claims 11-13, Kakinuma teaches wherein the electrode layers 4/8 are applied by means of a method selected from photolithographic patterning (col. 8, lines 3-16).

Regarding claims 14 and 15, Kakinuma teaches wherein the method is a batch process or a continuous process (col. 2, lines 10-15).

Regarding claim 16, Kakinuma teaches wherein the substrate comprises a pair of substantially parallel peripheral edges and the continuous electrode layer extends to the peripheral edges of the substrate (see Fig. 2).

Regarding claims 17, Prakash teaches further comprising providing at least one organic charge transport layer 32 between the light-emitting layer 30 and at least one of the electrode layers 12 [0058].

Regarding claims 18, Prakash teaches wherein the light-emitting layer 30 is selected from the group comprising small molecule emitter, a small molecule doped polymer, a light-emitting polymer, a doped light-emitting polymer, a blended light-emitting polymer, and combinations thereof [0058]-[0065].

Regarding claim 23, Prakash teaches wherein the substrate 10 is transparent [0048].

Regarding claim 25, Kakinuma wherein the second electrode layer 8 is continuous in the direction of the advancing web substrate 1 (col. 4, lines 1-35 and Fig. 2).

4. Claims 19-22 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prakash (US Pub No. 2005/0017628) and Kakinuma et al (U.S. Pat No. 6,579,422) (hereafter "Kakinuma") as applied to claim 1 above, and further in view of Cok (U.S. Pat No. 6,787,990).

Kakinuma does not teach cutting a portion from the web substrate forming an organic light-emitting device.

However, Cok teaches cutting a portion from the web substrate 20 forming an organic light-emitting device, wherein the continuous electrode layer 24/26 is continuous beyond the dimension of the device prior to cutting (col. 3, line 1-10 and col. 4, lines 9-27). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine cutting the web substrate 20 teaching of Cok with Kakinuma's OLED, because it would have produced a plurality of unit devices areas as taught by Cok, column 4, lines 9-27. Also, it would have been obvious to one with ordinary skill in the art to obtain the desired dimension of the organic light-emitting device after cutting as process parameters are optimized because the same materials are used with the same process steps, it appears that the modified Cok would inherently contain the same properties and functions as claimed.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc Hoang whose telephone number is (571) 272-1780. The examiner can normally be reached on Monday-Friday from 8.00 AM to 5.00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers of the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Quoc Hoang  
Patent examiner/AU 2818

  
David Nelms  
Supervisory Patent Examiner  
Technology Center 2800